BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Request of Progeny LMS, LLC	)	File Nos. _____
	)	
	)	WT Docket No. 12-202
For Modification of A Block Licenses	)	

OPPOSITION TO PETITION FOR MODIFICATION OF A BLOCK M-LMS LICENSES

PCS Partners, L.P. ("PCSP"), by its attorneys, hereby opposes the Petition for Modification of A Block Multilateration Location and Monitoring Service ("M-LMS") licenses (the "Petition") filed April 4, 2018 by Progeny LMS, LLC ("Progeny"). The following is respectfully shown.

I. BACKGROUND

On January 17, 2017, the Wireless Telecommunications Bureau's Mobility Division conditionally granted Progeny a waiver of the Commission's rules and extension of time to meet the construction deadlines for Progeny's M-LMS B Block and C Block licenses, denied its request for waiver and extension of time to meet construction deadlines for its M-LMS A Block licenses for the Minneapolis, MN and Sacramento, CA Economic Areas ("EA"), and deemed those licenses terminated. *Request of Progeny LMS, LLC for Waiver and Limited Extension of Time*, WT Dkt. 12-202, Order, 32 FCC Rcd 122 (WTB MD 2017) ("*A Block Termination Order*"). With regard to Progeny's A Block licenses, the Bureau:

> note[d] that the Commission's grant of authority to Progeny to commence commercial operation of its M-LMS network is limited to Progeny's B and C Block licenses. Progeny includes its two A Block authorizations in its request for waiver or extension of the construction deadlines, but, in contrast to its B and C Block arguments, fails to demonstrate that provision of service is possible under an

> extended timeframe, or even that relief is needed to develop equipment for commercial operation on the A Block. Commission records do not indicate that there is M-LMS equipment certified for operation under Part 90 of the Commission's rules on the A Block. We find that Progeny has not made any showing to justify a further extension of time to construct its two A Block licenses.

Progeny sought reconsideration of the A Block Termination Order with respect to the denial of relief for its A Block licenses. WT Dkt. 12-202, Petition for Reconsideration of Progeny LMS, LLC, File Nos. 0006729503 et al. (Feb. 16, 2017) ("A Block Termination Petition"). Progeny's A Block Termination Petition remains pending. Although the terminated status of Progeny's two A Block licenses is unchanged, Progeny now seeks additional relief – exceeding the relief denied in the A Block Termination Order – asking the Commission to "modify" the two terminated A Block licenses by converting them into M-LMS C Block licenses. Petition at 1. Progeny's new request is procedurally and substantively defective, and must be denied.

II. MODIFICATION WOULD NOT SERVE THE PUBLIC INTEREST

Progeny claims that modifying its M-LMS A Block licenses by assigning it the rights to M-LMS C Block spectrum in the Minneapolis and Sacramento EAs would promote the public interest. Petition at 6. Progeny's public interest claims hinge on its future plans in other markets: In essence, Progeny asserts that whatever benefits someday may be realized by the deployment of its technology in markets where its licenses have not been terminated, also could be realized by deploying that technology in two markets where its licenses terminated. It is clear, however, that modification would serve only Progeny's interests, not the public interest.

A. Progeny's Request Offers No Tangible Benefits

Progeny claims that modification would facilitate deployment of its service in two additional markets. However, it concedes that no carrier in fact has adopted its service in any market; rather, Progeny has "expressed its capability and willingness" to provide service ***if*** a

"wireless carrier … may wish to use its network." Petition at 7. Given that there is no current service in the public interest, any purported benefits of modifying Progeny's licenses so that its service might be "available" in two additional markets are purely speculative. And even if a carrier does "wish" to use Progeny's network in a particular market, there is no certainty that it in fact will do so, in Minneapolis or any other market.

Progeny asserts that modification would "potentially enable a faster time-to-first-fix ["TTFF"] for wireless handsets supported by Progeny's indoor location service," apparently because, in a "cold start,"[1] its system would need to "listen" for signals only in the M-LMS B and C Blocks, thereby "expedit[ing]" beacon detection. Petition at 8, 9. Progeny provides no data supporting its conjecture that "listening" for signals only in the B and C Blocks, and not in the A Block, across its entire footprint could "potentially" result in a time difference in the two markets where it otherwise would be "listening" in the A Block. Its assertion of possible expedited TTFF therefore is nothing more than guesswork. Commercial mobile network handsets routinely work on networks covering multiple frequency bands that have far greater separation than the M-LMS A and C Blocks. See 47 C.F.R. § 90.357 (separation between the lower portion of M-LMS A Block, at 904-909.75 MHz, and the lower portion of the C Block, at 921.750, is less than 18 MHz from; and the A Block forward link, at 927.75-928 MHz, is just 25 kHz from the C Block forward link, at 927.250-927.500 MHz). Progeny has not demonstrated that scanning for MBS beacon signals would take additional time if user equipment scans all M-LMS bands. In any event, avoiding such "potential" delays does not satisfy the public interest standard.

[1] "Cold start" means that a receiver has no information about the transmitter location(s) or which transmitter(s) are in view when the device is powered on, and no access to information about where to look for the appropriate signals.

Progeny also claims that "harmonizing" its spectrum by granting it rights to C Block spectrum in Minneapolis "would reduce the complexity and cost of wireless handsets that are supported by Progeny's indoor location service." Petition at 10. Here too Progeny provides no data, regarding either cost or complexity, making any claimed benefits illusory. In fact, the overall cost and complexity of Progeny's devices ultimately will be determined by the fact that Progeny is implementing a proprietary technology in a non-standard 3GPP radio band. To the extent there is any incremental cost and complexity attributable to scanning the A Block, in addition to the B and C Blocks – which Progeny has not shown to be the case – it likely would not be material.

B. Progeny's Unsupported Claims About Its Technology Cannot Justify Its Request

Progeny claims technical advantages for its proprietary technology that are not supported by its Petition or its previous requests for relief. For example, Progeny states that its technology "can operate in any portion of the 902-928 MHz band" and that its "Terrestrial Beacon System" ("TBS") could be "deploy[ed] in any frequency band." Petition at 7, 8. This claim contradicts its prior statements. In February 2017, Progeny stated that it "has not yet completed all of the same development measures for its A Block licenses that it has for its other licenses. Progeny delayed some measures for justifiable reasons that were explained to Division staff." A Block Termination Petition, at 6. Indeed, in the *A Block Termination Order*, the Bureau observed that Progeny's authority to commence commercial operation of its M-LMS network is limited to Progeny's B and C Block licenses, and that no M-LMS equipment has been certified for operation on A Block spectrum.[2]

[2] Curiously, the Bureau's own statements are not consistent: In 2014, referring to Progeny's technology, the Bureau stated that "equipment capable of operating in the M-LMS band currently exists"; in referring generically to "the M-LMS band," the Bureau did not distinguish

Progeny states that "[t]he open standards for Progeny's TBS technology are publicly available on the ATIS website." Petition at n.13. However, the M-LMS B and C Block spectrum in the United States in which Progeny plans to operate is not encompassed by the 3GPP LTE standard as an authorized LTE band for use in the United States. What Progeny has standardized in 3GPP is network signaling in the core network to exchange messages between base stations and the location server, in order to satisfy FCC requirements. The 3GPP standard simply makes possible multiple technology solutions for position location, of which Progeny's proprietary MBS solution is one additional option, joining widely adopted and established location solutions (e.g., Observed Time Difference of Arrival (OTDOA) and others). And, even adoption as a partial standard does not guarantee acceptance or use in the market; carriers may (or may not) choose to adopt it, and even if they adopt it, most likely will choose to incorporate multiple standards-based solutions depending on various factors (indoor vs. outdoor, etc.).

Moreover, www.atis.org does not have specific document(s) of the type cited by Progeny. A standard 3GPP document TS 36.305[3] does reference an ATIS document,[4] but the scope and purpose of that document is not specific to Progeny's TBS. The 3GPP standard document states clearly that a TBS consists of a network of ground-based transmitters, broadcasting signals only for positioning purposes. The current type of TBS positioning signals are the Metropolitan Broadcasting System (such as Progeny's dedicated beacon transmitters)

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the C Block from other M-LMS spectrum blocks. *Requests by FCR, Inc., et al. for Waiver and Limited Extension of Time*, Order, 29 FCC Rcd 10361, ¶ 17 (WTB MD 2014). It thus seemingly had concluded that "equipment capable of operating in" the M-LMS A Block existed at that time, and its action in that Order was based on that conclusion.

[3] 3GPP TS 36.305 v14.3.0 (2017-09) Stage 2 Functional Specification of User Equipment (UE) positioning in E-UTRAN (Release 14).

[4] https://standards.globalspec.com/std/9920176/atis-0500027, Recommendations for establishing wide scale indoor location performance. (online copy available, $220)

and Positioning Reference Signals – long standardized and widely used in LTE by commercial carriers.

Progeny also claims that "harmonization," that is, the ability to utilize C Block frequencies in all of its markets, "could enhance the quality" of its service. But Progeny's desire to "harmonize" its spectrum is solely for its own convenience; and Progeny, in asserting that its technology "can operate in any portion of the 902-928 MHz band," Petition at 3, concedes that whatever benefits its technology may provide are not exclusive to the M-LMS C Block.

C. Progeny's Data Regarding Sharing with Part 15 Devices Is Flawed

Progeny claims that "because of the greater density of Part 15 devices in the lower portion of the [902-928 MHz] band, it would clearly facilitate spectrum sharing between Progeny's M-LMS service and unlicensed Part 15 devices" to convert Progeny's canceled A Block licenses into C Block licenses. Petition at 13. Its basis for this claim is a chart that purports to show that since 2000 more Part 15 equipment has been certified to operate in the A Block than in the C Block. However, Progeny admits that its chart is not reliable, because "this data cannot be extrapolated to estimate how many Part 15 devices are actually operating in the A block or the C block." Petition at 13. Making the data even less relevant is the fact that it does not account for newer devices that may have replaced or modified earlier or obsolete versions, in either the A Block or the C Block. Surprisingly, given that it has field tested its system in the C Block, Progeny provides no data on devices specific to that block. Further undermining Progeny's claim is the absence of any data on Part 15 devices certified to operate in the B Block.

Progeny also ignores other relevant factors that affect overall channel occupancy and the potential for interference, including traffic volume-per-certified-device and transmission duty cycle. Progeny likewise fails to acknowledge that Part 15 devices in the 902-928 MHz

band are subject to the Commission's frequency hopping rules and regulations, and are prohibited from causing harmful interference to LMS systems in the 902-928 MHz band. 47 C.F.R. § 90.361. In sum, no valid conclusions may be drawn regarding the likelihood of interference based on the limited information provided by Progeny.

D. Progeny's Request for Relief Increases Administrative Burdens

Progeny claims that harmonizing its spectrum would "reduce the administrative burden of launching Progeny's location service in Minneapolis and Sacramento." Petition at 10. But by focusing solely on reducing its own "burden" of complying with Commission requirements with respect to the A Block, particularly field testing,[5] Progeny gives short shrift to other, actual burdens. In particular, Progeny ignores burdens that will fall on the Commission and third parties, particularly if Progeny is granted additional relief conditioned on the outcome of proceedings involving such third parties (including PCSP, whose Minneapolis C Block spectrum Progeny seeks through "modification"). These proceedings will be unresolved for years, while consuming valuable Commission resources and requiring PCSP and other affected parties to bear the burden of opposing Progeny's "modification" efforts. Far from reducing burdens, Progeny's one-sided request would increase them.

E. Progeny's Proposed "Modification" Is Not Consistent with Commission Precedent

Section 316 of the Communications Act gives the Commission discretion to modify licenses upon finding that modification would serve the "public interest, convenience, and necessity." However, the FCC has never "modified" licenses in the manner requested by Progeny – that is, by prejudging pending collateral proceedings and granting to one party

[5] Progeny has not explained why, if its technology is capable of operating in any M-LMS band, as it now claims, it did not field test in the A Block at the same time it field tested in the B and C Blocks.

spectrum rights held by another party, based solely on unsupported claims. Rather, the Commission has invoked Section 316 where the public benefits of modifying a license (by altering the service area or modifying the licensed bandwidth) were immediate and/or industry-wide. Thus, for example, license modification has been found appropriate in order to enable a joint venture of the seven Class I freight railroads in the U.S. to implement positive traction control, consistent with Congressional goals and to avoid interference;[6] to promote interoperability and eliminate the potential for harmful interference;[7] and to bring flexible mobile use spectrum to market more quickly and reduce interference.[8] In contrast, Progeny's modification would affect just one entity, even as its technology would remain just one option of many that carriers may adopt – and also remain contingent on a carrier selecting that option.[9]

True "harmonization" of M-LMS spectrum in the public interest would look much different than what Progeny proposes based on its self-serving assumptions. For example, harmonization could involve spectrum swaps by licensees, or elimination of the prohibition on common ownership of M-LMS A Block and C Block spectrum. While Progeny is free to file a petition for rulemaking that does not unfairly advantage itself over PCSP or other parties,

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[6] PTC-220, LLC, Request for Modification of Station KIVD0007 and Waivers to Implement Positive Train Control, 32 FCC Rcd 1835 (WTB MD 2017); PTC-220, LLC, 31 FCC Rcd 13249, ¶¶ 3-6, 12-15 (WTB MD 2016).

[7] Promoting Interoperability in the 700 MHz Commercial Spectrum, 28 FCC Rcd 15122, ¶¶ 34, 68 (2013).

[8] Service Rules for Advanced Wireless Services in the 2000-2020 and 2180-2200 MHz Bands, 27 FCC Rcd 16102, ¶¶ 169, 176 (2012).

[9] Compare Pacific Gas & Electric Co., 18 FCC Rcd 22761, ¶ 16 (2003) ("License modification pursuant to Section 316 should be undertaken only under those limited and unusual cases where, in the light of the circumstances, it is clear that such action will promote the public interest, convenience, and necessity.").

"harmonizing" by giving Progeny spectrum in two markets does not promote the public interest.[10]

III. PROGENY'S PETITION IS PROCEDURALLY DEFECTIVE

In seeking modification, Progeny fails to acknowledge that before it could be granted rights to M-LMS C Block spectrum in additional markets, the Commission first would have to take several actions affecting Progeny, PCSP, and other parties. First, the Commission would have to grant Progeny's A Block Termination Petition, and reinstate its A Block licenses. Second, the Commission would have to deny PCSP's pending request for review of the Bureau's 2017 Order that declined to grant, with respect to PCSP's M-LMS licenses (including the C Block license for the Minneapolis, MN EA), the same relief (waiver and extension) that Progeny requested, and that terminated those licenses. WT Dkt. 12-202, Application for Review of PCS Partners, LLC (Feb. 17, 2017). Third, the Commission also would have to deny the pending requests for review of the Bureau's Order that declined to grant waiver and extension of the M-LMS C Block license for the Sacramento, CA EA license and terminated that license. See WT Dkt. 12-229, Applications for Review, etc. (Feb. 17, 2017).

Progeny's Petition is predicated on a misguided assumption that the Commission will reinstate **only** Progeny's terminated A Block licenses, and not PCSP's terminated C Block license, thereby making "modification" merely an administrative function. Progeny does not attempt to justify this assumption. However, Progeny cannot assume that the Commission will accord disparate treatment to similarly situated parties. The reasonable assumption is that PCSP and Progeny will be treated similarly, with both parties' M-LMS licenses being reinstated.

[10] It is ironic that Progeny now argues that the availability of its technology in additional markets where it does not hold M-LMS spectrum is a public benefit. Had Progeny not declined to make its technology available to PCSP, the relief it seeks already would be realized. The public interest would be better served by requiring Progeny to make its technology available to PCSP on reasonable commercial terms.

Neither Progeny nor any other party opposed PCSP's pending Application for Review of the Bureau decision terminating its licenses. Accordingly, giving any credence to the assumptions (including accepting modification conditioned on the outcome of further proceedings, Petition at n.3) on which Progeny bases its Petition effectively turns its request into an opposition to PCSP's long-pending Application for Review. As such, the Progeny Petition for Modification is an untimely collateral attack on PCSP's Petition, and must be dismissed.

IV. CONCLUSION

In view of the foregoing, the Commission should deny Progeny's Petition.

Respectfully submitted,

PCS PARTNERS, L.P.

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May 21, 2018

CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of May, 2018, I caused a true and correct copy of the foregoing Opposition to Petition for Modification of A Block M-LMS Licenses to be sent via first-class United States mail, postage prepaid, to:

Bruce A. Olcott
Jones Day
51 Louisiana Ave. NW
Washington, DC 20001

/s E. Ashton Johnston
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